

**WHAT IS CLAIMED IS:**

1. 1. A composite push rod comprising:
  2. a hollow composite bar, a first end fitting bonded to a first end of said
  3. composite bar, a second end fitting bonded to a second end of said
  4. composite bar, both said first and second end fittings provided with a
  5. rounded end; and
6. said second end fitting adjustable in length.
1. 2. A composite push rod according to Claim 1 wherein said hollow
2. composite bar further comprises:
  3. an inner portion of said bar constructed of multiple layers of sheets of
  4. thermosetting, epoxy impregnated, longitudinally oriented fiber material,
  5. and
6. an outer portion of said bar constructed of a single layer of a sheet of
7. thermosetting, epoxy impregnated, woven fiber material.

1       3. A composite push rod according to Claim 2 wherein the inner  
2       portion of the bar consists of between 5 and 50 layers of sheets of  
3       thermosetting, epoxy impregnated longitudinally oriented fiber material.

1       4. A composite push rod according to Claim 3 wherein the first and  
2       second end fittings are each provided with a bore that extends through its  
3       corresponding fitting, and the bores that are provided in the fittings are  
4       continuous with an internal bore provided in the hollow bar so that there is  
5       a continuous bore through the bar and its bonded end fittings.

1       5. A composite push rod according to Claim 1 further comprising:  
2  
3       the first and second ends of the composite bar each provided with a  
4       beveled surface, a mating beveled surface provided on each of the first  
5       and second end fittings, said  
6  
5       mating beveled surfaces provided on the end fittings where the fittings  
6       bond to an end of the composite bar.

1       6. A composite push rod according to Claim 5 wherein the beveled  
2       surface provided on each of the first and second ends forms an angle of  
3       approximately 45 degrees with a longitudinal axis of the rod.

1           7. A composite push rod according to Claim 5 further comprising:

2           a tube provided on each end fitting where the fitting bonds to an end of the  
3           composite bar so that the tube inserts into a bore provided in the bar when  
4           the end fitting is bonded to its corresponding end of the bar.

1           8. A composite push rod according to Claim 5 wherein the first and  
2           second end fittings are each provided with a bore that extend through the  
3           fitting and the bores are continuous with an internal bore provided in the  
4           hollow bar so that there is a continuous bore through the bar and its  
5           bonded end fittings.

1           9. A composite push rod according to Claim 5 wherein said hollow  
2           composite bar further comprises:

3           an inner portion of said bar constructed of multiple layers of sheets of  
4           thermosetting, epoxy impregnated, longitudinally oriented fiber material,  
5           and

6           an outer portion of said bar constructed of a single layer of a sheet of  
7           thermosetting, epoxy impregnated, woven fiber material.

1       10. A composite push rod according to Claim 9 wherein the inner  
2       portion of the bar consists of between 5 and 50 layers of sheets of  
3       thermosetting, epoxy impregnated longitudinally oriented fiber material.

1       11. A composite push rod according to Claim 5 further comprising:

2       the first and second ends of the composite bar each provided with a flat  
3       second surface that mates with a flat second mating surface provided on  
4       each of the first and second end fittings, said

5       flat second mating surfaces provided on the end fittings where the fittings  
6       bond to an end of the composite bar.

1       12. A composite push rod according to Claim 11 wherein the flat  
2       second surface provided on each of the first and second ends of the  
3       composite bar is approximately perpendicular to a longitudinal axis of the  
4       bar.